

2018 Consumer Confidence Report

Water System Name: **Phillips 66**

Report Date: **June 14, 2019**

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2018 and may include earlier monitoring data.

Este informe contiene información muy importante sobre su agua para beber. Tradúzcalo ó hable con alguien que lo entienda bien. Favor de comunicarse Phillips 66 a Santa Maria Refinery para asistirlo en español.

Santa Maria Refinery's water met all primary and secondary drinking water standards. The tables below list all the constituents that were detected and show how they compare to the State and Federal standards. The Department of Environmental Health requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. As such, some of the data, though representative of the water quality, are more than one year old. All the results are from the most recent sampling event for each listed constituent.

The samples are collected at the source (well water) and at the potable water distribution points. The distribution water is a mixture of reverse osmosis (RO) water and well water. The potable water stream goes through UV filters and activated carbon filters to the distribution system. Tables 1 and 2 show results for samples collected at various distribution points. Tables 3, 4 and 5 show results for samples collected at the source water: well #2, well #4 and well #5. Although the report includes data from the water source in Tables 3, 4 and 5, the potable water that the consumer contacts is from the potable water distribution system.

Phillips 66 is committed to keeping you informed and providing this annual review of the water supply. Employees, visitors, and other water users may communicate concerns and other issues regarding the water system to Kristen Kopp at (805) 343-3241. Any issues regarding changes to the potable water system would involve the facility managers and supervisors and be discussed in facility operations meetings.

If you need copies of this report or have any questions concerning the potable water system, please contact Kristen Kopp at (805) 343-3241 or email at Kristen.M.Kopp@P66.com.

Type of water source(s) in use:

Well Water

Name & general location of source(s):

Well #2, #4, and #5 are located within the Santa Maria Refinery. Well #2 is near Tank 553, Well #4 is between "F" Street and Tank 800, and Well #5 is between the Carbon Plant access road and the Maintenance contractor building.

Drinking Water Source Assessment information:

A source water assessment was conducted for Wells 02, 04 and 05 of the Phillips 66 (ConocoPhillips /Phillips 66/Tosco Refining) water system in November 2002. No contaminants have been detected in the water supply, however the source is considered most vulnerable to the following activities:

Chemical/petroleum processing/storage.

A copy of the complete assessment may be viewed at:

County of San Luis Obispo, Environmental Health Services
2156 Sierra Way, San Luis Obispo, CA 93401

You may request a summary of the assessment be sent to you by contacting Environmental Health Services at 805-781-5544.

TERMS USED IN THIS REPORT

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (USEPA).

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Primary Drinking Water Standards (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

SMCL: Secondary Maximum Contaminant Level

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (µg/L)

ppt: parts per trillion or nanograms per liter (ng/L)

ppq: parts per quadrillion or picogram per liter (pg/L)

pCi/L: picocuries per liter (a measure of radiation)

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- *Microbial contaminants*, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants*, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides*, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- *Radioactive contaminants*, that can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the U.S. EPA and the State Board prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, and 5 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old. Any violation of an AL, MCL, MRDL or TT is asterisked. Additional information regarding the violation is provided later in this report.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

| Microbiological Contaminants (complete if bacteria detected) | Highest No. of Detections | No. of Months in Violation | MCL | MCLG | Typical Source of Bacteria |
|---|---------------------------|----------------------------|--|------|--------------------------------------|
| Total Coliform Bacteria (state Total Coliform Rule) | (In a mo.) 0 | 0 | 1 positive monthly sample | 0 | Naturally present in the environment |
| Fecal Coliform or <i>E. coli</i> (state Total Coliform Rule) | (In the year) 0 | 0 | A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or <i>E. coli</i> positive | | Human and animal fecal waste |
| <i>E. coli</i> (federal Revised Total Coliform Rule) | (In the year) 0 | 0 | (a) | 0 | Human and animal fecal waste |

(a) Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

| Lead and Copper (complete if lead or copper detected in the last sample set) | Sample Date | No. of Samples Collected | 90 th Percentile Level Detected | No. Sites Exceeding AL | AL | PHG | No. of Schools Requesting Lead Sampling | Typical Source of Contaminant |
|---|-------------|--------------------------|--|------------------------|-----|-----|---|---|
| Lead (ppb) | 2018 | 16 | 4.2 | 0 | 15 | 0.2 | 0 | Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits |
| Copper (ppm) | 2018 | 16 | 0.120 | 0 | 1.3 | 0.3 | Not applicable | Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

| Chemical or Constituent (and reporting units) | Sample Date | Level Detected | Range of Detections | MCL | PHG (MCLG) | Typical Source of Contaminant |
|--|-------------|----------------|---------------------|------|------------|--|
| Sodium (ppm) | 2017 | 82 | 64 - 100 | none | none | Salt present in the water and is generally naturally occurring |
| Hardness (ppm) | 2017 | 547 | 430 - 670 | none | none | Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring |

| TABLE 4 – DETECTION OF CONTAMINANTS WITH A <u>PRIMARY</u> DRINKING WATER STANDARD | | | | | | |
|---|-------------|----------------|---------------------|--------------------|-------------------------|--|
| Chemical or Constituent (and reporting units) | Sample Date | Level Detected | Range of Detections | MCL [MRDL] | PHG (MCLG) [MRDLG] | Typical Source of Contaminant |
| Nitrate (as nitrogen, N) (ppm) | 2018 | 2.5 | 0.46 – 5.0 | 10 | 10 | Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits. |
| Aluminum (ppm) | 2017 & 2018 | 0.066 | <0.050 - 0.230 | 1 | 0.6 | Erosion of natural deposits; residue from some surface water treatment processes |
| Fluoride (ppm) | 2017 | 0.25 | 0.22 - 0.29 | 2.0 | 1 | Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories |
| Gross Alpha Activity (pCi/L) | 2014 & 2015 | 3.06 | <3.0 – 7.18 | 15 | (0) | Erosion of natural deposits |
| TABLE 5 – DETECTION OF CONTAMINANTS WITH A <u>SECONDARY</u> DRINKING WATER STANDARD | | | | | | |
| Chemical or Constituent (and reporting units) | Sample Date | Level Detected | Range of Detections | SMCL | PHG (MCLG) | Typical Source of Contaminant |
| Aluminum (ppb) | 2017 & 2018 | 66 | <50-230 | 200 | N/A | Erosion of natural deposits; residue from some surface water treatment processes |
| Color (Units) | 2017 | 1.3 | 1.0 – 2.0 | 15 | N/A | Naturally-occurring organic materials |
| Turbidity (Units, NTU) | 2017 & 2018 | 0.3 | 0.18 – 0.52 | 5 | N/A | Soil runoff |
| Total Dissolved Solids (TDS) (ppm) | 2017 | 863 | 690 - 980 | 1000 | N/A | Runoff/leaching from natural deposits |
| Specific Conductance (micromhos/cm) | 2017 | 1165 | 925 - 1300 | 1600 | N/A | Substances that form ions when in water; seawater influence |
| Chloride (ppm) | 2017 | 69 | 41 - 120 | 500 | N/A | Runoff/leaching from natural deposits; seawater influence |
| Sulfate (ppm) | 2017 | 380 | 290 - 480 | 500 | N/A | Runoff/leaching from natural deposits; industrial wastes |
| TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS | | | | | | |
| Chemical or Constituent (and reporting units) | Sample Date | Level Detected | Range of Detections | Notification Level | Health Effects Language | |
| None | --- | n/a | --- | --- | n/a | |

Additional General Information on Drinking Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. U.S. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

Secondary Drinking Water Standards listed in Table 5 are non-mandatory guidelines to assist water systems in managing their drinking water for aesthetic considerations such as taste, color and odor in drinking water. These constituents do not pose a risk to human health.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Santa Maria Refinery is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/lead>.

Summary Information for Violation of a MCL, MRDL, AL, TT, or Monitoring and Reporting Requirement & Compliance with Other Regulations

The State requires the Refinery to test the water on a regular basis and last year the potable water met all U.S. EPA and State drinking water health standards. There were no violations of a MCL, MRDL, AL, TT or Monitoring and Reporting requirement. In addition, there were no fecal indicator-positive results for Ground Water Source samples.